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Hydrogen strategy: Rheinmetall wins new multi-million-euro order for fuel cell components

The Düsseldorf-based technology enterprise Rheinmetall has won another major contract for fuel cell components, specifically cathode valves. Worth a figure in the mid-double-digit million-euro range, the order is from a European maker of fuel cells.

The order package reconfirms the success to date of the Group's hydrogen strategy, which it is systematically pursuing to expand its position in the field of alternative drive technologies. As a proven technology partner, Rheinmetall has been helping for years to optimize the use of hydrogen and thus to bring about the desired energy revolution – for vehicles of various categories as well as for stationary systems.

The components ordered here are flap systems with integrated position control electronics that serve as bypass and shut off valves for fuel cells. Thanks to their special design, they meet stringent sealing requirements, with leakage of max. 2ccm/min. Because these components come in different variants and because their position control electronics can be adapted to meet customer-specific requirements, as well as due to their extremely low leakage characteristics, Rheinmetall has succeeded in placing the product on the market.

The first parts were shipped earlier this year; full series production is set to commence in 2025/2026. By 2030, around 1.5 million of these components will have been produced at Rheinmetall's Berlin plant. Based on the flap system samples already delivered and successfully verified, production lines in Berlin will be adapted starting in 2023 for higher output volumes.

Taking into account contracts for cathode valves already awarded by two other fuel cell manufacturers, lifetime volume is now in the upper two-digit million-euro range. These orders demonstrate the large market potential of hydrogen components, while simultaneously highlighting Rheinmetall's ability to come up with forward-looking solutions in close cooperation with customers. The Group is steadily strengthening its position as a leading global supplier of flap systems, thus facilitating society's transition from petrol- and diesel-powered engines to alternative drive technologies.

As part of Germany's national hydrogen initiative, Rheinmetall AG is a partner company of the new Hydrogen Technology Innovation and Technology Centre in Duisburg. The Group's Sensors and Actuators division develops innovative



► Key facts

- Rheinmetall wins another big order for fuel cell technology
- Total volume in the mid-two-digit million-euro range
- 1.5 million units ordered
- Cathode valves regulate airflow and shut off fuel cell stacks
- Multiple variants available; adaptable to meet customer specifications; extremely low leakage

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solutions that support industry with high-quality hydrogen-related products, in turn enabling efficient and reliable fuel cells.

The flap systems, i.e., cathode valves, ordered from Rheinmetall regulate the fresh and exhaust airflows and insulate the fuel cell stacks on the *cathode side* at the inlet and outlet points from the ambient environment. Achieved through a special design, the system's very low leakage has been successfully demonstrated. It has an operating life of up to 12,000 hours. Now in development, the next generation should have an increased service life of up to 30,000 hours in commercial vehicles, marine, and stationary applications.

The Group is currently engaged in in-depth talks with other customers regarding mobile and stationary applications for fuel cell technology, which are likely to lead to new business and further nominations.